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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,658	10/13/2000	TOKURO OZAWA	107260	7418

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EXAMINER

AWAD, AMR A

ART UNIT	PAPER NUMBER
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2675

26

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/689,658

Applicant(s)

OZAWA, TOKURO

Examiner

Amr Awad

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2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-23 and 27 is/are allowed.
- 6) ☒ Claim(s) 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Rejections - 35 U. S. C. § 103

1. The following is a quotation of 35 U. S. C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 24-26 are rejected under 35 U. S. C. 103 (a) as being unpatentable over in view of Kusada (US patent NO. 6,256,024) in view of Maekawa (US patent NO. 6,256,024).

As to independent claims 24 and 25, Kusada (figure 13) teaches sampling and hold switches (150 and 151) (col. 20, lines 51-62), an A/D converter (A/D 101 to 106 in figure 14) for converting a first analog signal that is supplied through a corresponding sampling switches (col. 21, lines 52-58), a number of latches (129-134) storing digital signal (col. 23, lines 1-5), and a D/A converter (135-140), each D/A converter converts the digital signal held in the corresponding latches into a second analog to digital signal to be supplied to the plurality of pixels (col. 23, lines 1-8).

However, Maekawa teaches that the N sampling switches, the N latches and the N D/A converters being disposed on one substrate (col. 3, lines 48-53).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Maekawa having the driving

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elements disposed on one substrate to be included in Kusada's device so as to reduce the size of the liquid crystal driving area as well as to reduce the cost.

As to claim 26, Maekawa teaches that the LCD can be used for electronic apparatus (personal computer) (col. 2, lines 18-21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the device in a personal computer so as to increase the versatilities of the device.

Allowable Subject Matter

3. Claims 10-23 and 27 are allowed.

Response to Arguments

4. Applicant's arguments filed April 26, 2004 have been fully considered but they are not persuasive. With respect to the argument regarding independent claims 15 and 27, the argument is moot in view of indicating that these claims are allowed.

Applicant (top three paragraphs of page 3) argued that the combination of Kusada and Maekawa fails to teach or suggest all of the features recited in the claims because the cited combination fails to teach or suggest that the A/D conversion circuit, the storage device and the D/A conversion circuit being disposed on one substrates on which the plurality of pixels are disposed. Examiner respectfully disagrees. The rejection above is based on the combination of the two references as whole. The rejection clearly shows that Maekawa teaches that the N sampling switches, the N latches and the N

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D/A converters being disposed on one substrate (col. 3, lines 48-53). Therefore, the combination clearly teaches the invention as claimed in claims 24-25.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703)305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Amr Awad
Primary Examiner
Art Unit 2675

A.A